MDOT
Michigan Department of Transportation

OFFICE MEMORANDUM

DATE: October 6, 1999

TO: Region Engineers
Region Associate Engineers - Delivery
Region Construction Engineers
Region Materials Supervisors/Engineers
TSC Managers
Resident/Project Engineers

FROM: C. Thomas Maki
Chief Operations Officer

Gary D. Taylor
Chief Engineer/Deputy Director
Bureau of Highway Technical Services

SUBJECT: Bureau of Highway Instructional Memorandum 1999-18
Bituminous Overlay Construction Issues

Bituminous Overlays on Existing Concrete

Joint sealant, dirt, debris, and moisture that is not removed from existing concrete joints and cracks can create ridges and bumps in bituminous overlays.

The pay item *Pavement, Cleaning* requires blowing of all joints and cracks with compressed air to completely remove loose material.

The pay item *Joint and Crack, Cleanout* consists of removing joint sealant or debris that cannot be removed using *Pavement, Cleaning.*

Hand Patching should be used to fill in cleaned joints and cracks where possible.

All three pay items need to be set up on bituminous overlays paving projects over existing concrete pavements. If not included, it is essential to establish extra items of work by authorization.

Constructability Concerns Using Superpave Mixtures

The compactive effort required to achieve density on Superpave mixtures may create settlements or other problems when paving over areas with sensitive subsurface conditions (weak soils, drainage structures, etc.). During design, pavement areas over utilities, poor subgrades and/or high water tables need to be identified on the plans and corrected whenever

possible. However, sensitive areas that cannot be corrected during design, need to be constructed with reduced compactive effort and should be so identified and noted on the plans. In these areas, the contractor should be directed not to use vibratory rollers. As an alternative, other types of bituminous mixtures will be considered for these situations.

A recommended plan note is as follows: Vibratory rollers shall not be used when compacting subsurface sensitive areas as noted on the plans. The contractor shall achieve the required density using alternate means.

Please contact Mike Frankhouse, Bituminous Engineer, at 517-322-5672 to discuss these work items or resolution to these issues.

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Chief Operations Officer

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Bureau of Highway Technical Services

Subject Index: Bituminous

BOHTS:C/T:MF:kab

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